

NEW AND INTERESTING RECORDS OF ADVENTIVE PLANTS FROM THE AUCKLAND INSTITUTE AND MUSEUM HERBARIUM 2

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Abstract. This second list of recent additions to the Auckland Institute and Museum Herbarium (AK) and of some re-identified earlier gatherings provides further information on the distribution of adventive species.

Since my first account (Bangerter 1975) of some adventive plants, either recently acquired or re-identified, further specimens have been added to the Auckland Institute and Museum Herbarium and corrections have been made to other earlier gatherings. The new material has been collected mainly by the Herbarium staff or myself, in sufficient quantity where possible, to provide specimens for overseas exchange. As a follow-up to the distribution, noted in my previous list, of a segregate species, *Aphanes microcarpa*, a further locality is given: in earlier publications this would have been placed in the aggregate *Aphanes arvensis*. Further localities are also given for *Vicia disperma* to indicate its wider occurrence, not only in the Auckland Domain, but well beyond.

To aid in the identification of closely allied species such as *Cardamine hirsuta* and *C. flexuosa* attention is drawn to literature where more detailed information may be found. Reference to early published lists has enabled a more complete historical background to be provided for herbarium specimens such as that of *Barbarea vulgaris*, formerly misplaced under *Brassica* sp.

The nomenclature adopted is that published by the New Zealand Weed and Pest Control Society (1969). For species not included in that work references are given to the publications consulted. Specimens are cited by collector's numbers or, in the absence of these, by the AK Herbarium number.

CRUCIFERAE

Barbarea intermedia Bor.

Three gatherings of this species are in the Herbarium, two from the same locality: Lake Waikaremoana, camping ground, 1958, P. Hynes, AK 50337; Lake Waikaremoana, 1974, E. B. Bangerter 5212; and one from Waitomo, Awakino Gorge, 1975, J. H. Goulding 622. I have found few records in the literature for this species: Healy (1969) for Canterbury and Wardle (1975) for Westland National Park. Allan (1940) gives "occasional in waste places in both Islands" but comments "... the records of the different species of *Barbarea* are untrustworthy and the distribution of all needs further investigation."

Barbarea vulgaris R. Br.

Canterbury, Ashburton, undated, W. W. Smith, AK 63227, 63229 as *Brassica* sp. These two sheets have Herb. T. F. Cheeseman labels which bear no date, but Smith (1904) includes the species in his Ashburton list, which is referred to by Healy (1969). This record may thus be taken as a trustworthy one.

Cardamine flexuosa With.

Waitakere Range, damp shady hollow, 1973, A. E. Orchard 4035; Torbay, Awaruka Bush Reserve, by creek, 1973, E. B. Bangerter 5094; Mairangi Bay, weed in damp area of neglected garden, 1975, E. B. Bangerter 5256. These are the only gatherings in the Herbarium of this species, the distributional history of which in New Zealand is given by Healy (1957). Detailed description of this and the allied adventive of drier situations, *C. hirsuta* L., are provided by Pritchard (1957) where he discusses their relationship to native species.

Raphanus maritimus Sm.

Lower Hutt, Avalon, Hutt River riverbank, 1975, J. H. Goulding 662. I cannot trace early records of this species but Healy (1957) cites specimens from the Silverstream/Upper Hutt district and from Eastbourne, Wellington Harbour. Miss Goulding's material is in good fruit, showing the fewer, deeply-constricted joints and relatively shorter beak. It is the only certain representative of this species in the Herbarium, most gatherings being referable to *R. raphanistrum* L. or being inadequate for certain identification.

CARYOPHYLLACEAE

Lychnis flos-cuculi L.

Raglan, Onewhero farm, 1975, D. Walter, AK 137351. This is the only New Zealand specimen in the Herbarium of this species, which is recorded by early botanists e.g. Cheeseman, Kirk and Smith. Later writers have repeated the early records and I have been able to trace only one note during the intervening years, "Noted in waste land, Shannon, S. Mitchell.", published by Healy (1944). The Raglan record would seem to be the first for the Auckland Province.

POLYGONACEAE

Polygonum arenastrum Bor.

Auckland Domain, playing field, 1974, E. B. Bangerter 5161. Another specimen, Onewhero, Keal's Farm, 1965, P. Hynes, AK 104833, is in the Herbarium as *P. aequale* Lindm., under which synonym Allan (1940) gives some brief details of this segregate of the aggregate *P. aviculare* L. The nomenclature followed is that of Webb and Chater (1964). Further study of this complex is needed, including re-examination of herbarium material.

EUPHORBIACEAE

Euphorbia stricta L.

The only sheet of this species in the Herbarium is labelled Whangarei, south-west of Oakura Bay settlement, 1972, A. E. Orchard 3703. It does not appear to

be recorded in the earliest literature but Allan (1940) says "Occasional in waste places in Auckland City and Whangarei."

ESCALLONIACEAE

Escallonia montevidensis DC.

Glen Eden, Waikumete Cemetery, bank near crumbling monument, 1976, E. B. Bangerter 5297. This was taken in company with Mrs K. Wood and Miss S. Bowman who also collected the plant, which was subsequently identified by Mr A. E. Esler. Three other gatherings are in the Herbarium: Rangitoto, undated, L. M. Cranwell (possibly in the 1930s); Mt Hobson, Remuera, cultivated, 1948, S. A. Rose, AK 24516; Mt Hobson, overhanging Remuera Road, 1966, J. H. Goulding, AK 108864. I cannot trace records of this species in the literature, with the possible exception of *E. floribunda* (often confused with *E. montevidensis*, see Bean (1951)), offered for sale by D. Hay of Montpellier Nursery, Auckland, in his "Annual Calendar and Descriptive Catalogue for 1872".

ROSACEAE

Aphanes microcarpa (Boiss. & Reut.) Rothm.

Auckland, Mount Wellington, among short grass, 1975, E. B. Bangerter 5271. This gathering, made in company with Mr A. E. Esler and Miss Shirley Bowman, is the second in the Herbarium. *A. arvensis* L., in addition to the gathering cited by me (Bangerter 1975), is represented only by the Cheeseman specimens from Raglan cited by Healy (1954). More material is required to aid study of the distribution of these two species.

Filipendula ulmaria (L.) Maxim.

Stewart Island, Halfmoon Bay, frequent garden escape, 1963, P. Hynes, AK 92190. This is the only New Zealand specimen of this fragrant plant in the Herbarium and I have not been able to trace any record in the literature. It is common in the British Isles where it is known as "meadow-sweet". *F. hexapetala* Moench., the other well-known British species, has been recorded by Healy (1944). Nomenclature follows Clapham, Tutin and Warburg (1962).

PAPILIONACEAE

Vicia disperma DC.

Since my note last year (Bangerter 1975: 93) that Miss J. Goulding "has not observed this plant elsewhere in the Domain", she has twice found it in the area: Auckland Domain, under Eucalypts near cricket ground, 1975, J. H. Goulding 705; weedy edge of Domain Drive, 1975, J. H. Goulding 712. A further gathering, Browns Bay, 1975, E. B. Bangerter 5279, constitutes the first in the Herbarium from outside the Domain area. Another vetch, *Vicia hirsuta* (L.) S. F. Gray, somewhat similar though less robust, also has a two-seeded pod, which, however, is hairy and much smaller when mature than the glabrous pod of *V. disperma*; the former has nearly equal calyx-teeth, whereas those of the latter are unequal in length.

UMBELLIFERAE

Sison amomum L.

A recent addition is Waitemata, Glenfield, roadside, 1976, E. B. Bangerter 5300. From the few gatherings in the Herbarium, this plant, which I have not seen elsewhere than above, seems to have a scattered distribution and is not often listed in the literature. It was first recorded for New Zealand by Healy (1944).

RUBIACEAE

Galium parisiense L. var. *trichocarpum* Tausch.

Bay of Islands, c. 5½ km south of Kerikeri, 1973, T. A. Halliday 5. This is the first example of the variety in the Herbarium and Allan (1940) states that this variety is rare. It is characterised by pronounced bristles on the fruit. Other specimens of *G. parisiense* show either smooth or granular fruits.

CONVOLVULACEAE

Calystegia silvatica (Kit.) Griseb.

Auckland, Newmarket, in waste area, 1976, J. H. Goulding 721. This plant has the strongly inflated bracteoles typical of the species, and larger flowers than those of *C. sepium* (L.) R.Br. Healey (1969, 1973) lists *C. silvatica* as a species distinct from *C. sepium*, clearly accepting the former as adventive. Brummitt (1972), whose nomenclature is followed here, also treats *C. silvatica* as a separate species although it has been regarded by some British botanists as a subspecies of *C. sepium*.

LABIATAE

Mentha X citrata Ehrh.

Rotorua, Lake Rotoiti, 1959, D. V. G. Woods, AK 119286 as *M. aquatica* L.; Mairangi Bay, swampy area, 1975, E. B. Bangerter 5249; Remuera, J. H. Goulding, AK 117291. The last is a garden specimen. This hybrid (*M. aquatica* L. X *M. spicata* L.), known as Bergamot Mint, has a characteristic lemony scent. Healy (1958) says that it had previously been included by New Zealand authors under *M. aquatica*. He also comments that the only undoubted specimen of the latter species that he had seen was from the Bay of Islands, 1863, T. Kirk, in the Dominion Museum Herbarium, Wellington. The only specimen in the Auckland Herbarium labelled *M. aquatica* is a capitate mint with very hairy calyces collected by T. F. Cheeseman, AK 94259, undated, also from the Bay of Islands and therefore probably rightly named.

AMARYLLIDACEAE

Allium neapolitanum Cyr.

Auckland, Remuera, weed in vegetable garden, 1975, J. H. Goulding 608; Auckland Domain, gully, edge of tip, 1975, J. H. Goulding 609. I am unable to find any other records of this species as a horticultural weed or garden escape in New Zealand. Polunin (1969), who gave a description and illustration, is referred to for nomenclature.

Allium roseum subsp. *bulbiferum* (DC.) E. F. Warburg

Auckland Domain, weed in Museum courtyard, 1975, J. H. Goulding 618. This is the first example in the Herbarium of this plant and is the first record so far as I can ascertain for the North Island. Healy (1958) gives the first New Zealand record, from Christchurch, 1955, and notes that the sub-species is "characterised by the bulbils borne in the umbels with the flowers." He also lists the sub-species for the Canterbury area (Healy, 1969).

Tulbaghia violacea Harv.

Glen Eden, Waikumete Cemetery, among grasses at side of path, 1976, E. B. Bangerter 5298. This was taken in company with Mrs K. Wood and Miss Bowman, and Mr A. E. Esler kindly provided the determination for this specimen, which, he informs me, constitutes the first record for New Zealand.

IRIDACEAE

Lapeirousia laxa (Thunb.) N.E.Br.

Auckland, Parnell, growing wild under pines, privet and *Solanum*, 1975, E. G. Turbott, AK 138550; Whangaparaoa, Tindalls Beach, weedy garden, specimen grown in Auckland, Remuera garden, 1975, J. H. Goulding 704. These are the only representatives of this garden escape in the Herbarium and I cannot find any other records. Lawrence (1955) is the reference for nomenclature.

GRAMINEAE

Panicum dichotomiflorum Michx.

Mairangi Bay, in grounds of the Primary School, 1973, E. B. Bangerter 5013. The identification is confirmed by Dr J. F. Alex (University of Guelph). This is the only New Zealand specimen of this North American grass in the Herbarium. The species was first recorded by Healy (1946) from three stations in the North Island and he later (1973) describes it as a subtropical species adventive in cultivated land.

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